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THE PLANT DISEASE REPORTER

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THE PLANT DISEASE SURVEY

Division of Mycology and Disease Survey
BUREAU OF PLANT INDUSTRY, SOILS, AND AGRICULTURAL ENGINEERING
AGRICULTURAL RESEARCH ADMINISTRATION
UNITED STATES DEPARTMENT OF AGRICULTURE

SUPPLEMENT 185

PRELIMINARY ESTIMATES OF ACREAGES OF CROP LANDS IN THE UNITED STATES INFESTED WITH SOME ORGANISMS CAUSING PLANT DISEASES

Supplement 185 August 1, 1949

The Plant Disease Reporter is issued as a service to plant pathologists throughout the United States. It contains reports, summaries, observations, and comments submitted voluntarily by qualified observers. These reports often are in the form of suggestions, queries, and opinions, frequently purely tentative, offered for consideration or discussion rather than as matters of established fact. In accepting and publishing this material the Division of Mycology and Disease Survey serves merely as an informational clearing house. It does not assume responsibility for the subject matter.

PLANT DISEASE REPORTER SUPPLEMENT

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THE PLANT DISEASE SURVEY
DIVISION OF MYCOLOGY AND DISEASE SURVEY

Plant Industry Station Beltsville, Maryland

PRELIMINARY ESTIMATES OF ACREAGES OF CROP LANDS IN THE UNITED STATES INFESTED WITH SOME ORGANISMS CAUSING PLANT DISEASES

Compiled by Paul R. Miller and Nellie W. Nance
from reports of Collaborators of the Plant Disease Survey

Plant Disease Reporter
Supplement 185 August 1, 1949

FOREWORD

Last fall (1948) the Plant Disease Survey asked its Chief Collaborator in each State for an estimate of the area of crop land infested by various plant pathogenic organisms. There are obvious reasons why it is important to have such estimates, but the difficulty of obtaining them is equally clear.

Except, perhaps, locally and spasmodically or for special purposes, no attempt had been made to measure the area of infested land. This meant that, in most cases, the Collaborator had to base his estimate on what was known about loss to crops from these diseases in relation to the land potentially available for these crops. This would give a "working figure", which is all these preliminary estimates can claim to be.

On the other hand, both plant pathologists and industrial workers need the background that only some numerical statement, tentative though it may be, can supply. Effective soil treatments have been devised for nematode control, and it is likely that in the near future equally effective chemicals will be found to control at least some of the soil-borne fungi. It is vitally necessary that manufacturers should be able to gauge potential requirements, in order to plan in the beginning for economical production and distribution of different types of chemical treatments, instead of proceeding blindly in hit-or-miss fashion. Farmers also would benefit from realistically planned production, since it would enable manufacturers to set prices within ranges effective for everyday practical use, not merely for experimental trial or for exceptional purposes. Future evaluation of effectiveness and results of such treatments or other control measures depends on our present knowledge.

Although these are the most compelling reasons just now, there are others, e. g., as a starting-point to determine the amount and rapidity of spread, or as a basis for judging the effect of soil infestation on land values or on crop industries, or others. We cannot tell at present what will be the most important future use for such estimates, but we can put them on record now, while it is still possible to obtain them.

Twenty-eight States responded with some sort of estimate. In their replies, some Collaborators remarked that the request for definite statements of infested acreages furnished an opportunity and a reason for more concrete thought upon this subject than they had ever given it before.

Others, however, as always happens when estimates are asked for, wrote that they could give no figure reliable enough to be of any use. In many cases it is true that there is simply no information on which to base an estimate. In others, there is the personal feeling that no figure is useful unless it is exact. This feeling is to be respected, as leading to careful accurate work where exactness is required. But it does not allow for the times when even an incomplete estimate now is more useful than any number of exact measurements at some future time. If we always wait for exact figures on such a question as this one, we must expect to suffer from chronic standstill in much of our work.

There must be a starting point. Tentative estimates should not be misleading if their incompleteness is allowed for in any use that is made of them, and if they are used only where such estimates are truly appropiate.

It is as a starting-point only that we put these estimates on record. They will be subject to constant revision as information accumulates. It is our hope that somebody at some future time will be able to compile more complete and exact figures.

The results have been summarized in Tables and Maps giving the estimated acreage in the States reporting land potentially available for particular crops infested with some of the more widespread pathogenic soil-borne organisms.

It must be remembered that the Tables and Maps have been compiled from the reports received and refer only to the States cooperating. The figures for each State are based on the best information available to the Collaborator. In some States this information is more complete than in others. Obviously, the estimates often overlap, that is, the same land may be infested with more than one organism.

We cannot emphasize too strongly that these figures must, in practically all cases, be considered as tentative guesses, not as measurements; as a foundation to build on; not for use where exact accuracy is required, but extremely useful as indicators.

To sum up, repeat, and stress again, these estimates are working tools, not a completed task.

We take this opportunity to thank those of our Collaborators who cooperated so fully in this difficult task. They bear the major part of the responsibility, but also, we fully believe, they will be glad to have had a part in such a useful project. All the credit is due to them. Their names are given below.

Those reporting:

ALABAMA
W. H. Greenleaf
Vernon G. Perry
A. L. Smith
Coyt Wilson

ARKANSAS
E. M. Cralley
Jos. P. Fulton
Curtis L. Mason
V. H. Young

CONNECTICUT
A. E. Dimond

DELAWARE
J. W. Heuberger

GEORGIA
Julian H. Miller

ILLINOIS
G. H. Boewe
M. B. Linn
L. R. Tehon

KANSAS
E. D. Hansing

KENTUCKY
W. D. Valleau

MAINE
D. Folsom

MARYLAND
C. E. Cox
W. F. Jeffers
R. A. Jehle

MASSACHUSETTS
O. C. Boyd

MICHIGAN
D. Cation
J. H. Muncie
Ray Nelson
M. C. Strong

MINNESOTA
Carl J. Eide

MONTANA
H. E. Morris

NEVADA
O. F. Smith

NEW HAMPSHIRE
M. C. Richards

NEW JERSEY
C. M. Haenseler

NEW YORK
Charles Chupp

NORTH DAKOTA
W. E. Brentzel

OKLAHOMA
K. Starr Chester

PENNSYLVANIA
R. S. Kirby

RHODE ISLAND
Frank L. Howard

SOUTH DAKOTA
C. M. Nagel

TEXAS
A. A. Dunlap

VIRGINIA
S. A. Wingard

WEST VIRGINIA
C. F. Bishop
J. G. Leach

WISCONSIN
R. E. Vaughan

WYOMING
G. H. Starr

Tables and maps summarizing the reports follow.

Starred figures in the tables have been interpolated by the compilers, from the Collaborator's report and acreage given in the U. S. Department of Agriculture; Agricultural Statistics for 1947.

Table 1. Estimated potential acreage of crop land infested with Fusarium, in States reporting. These figures are estimates only, based on the best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this organism and the host named; from other States no estimate received. Not to be interpreted as a record of distribution.

State reporting	Acreage affected	Remarks
ALFALFA AND TIMOTHY		
South Dakota	381,000	
ASPARAGUS		
Massachusetts	1,000	
BARLEY		
Illinois	23,000[1]	231,300 acres average in 1929-38.
North Dakota	2,638,000	
Wisconsin	25,000	50,000 acres affected earlier. Resistant varieties caused decrease.
BEAN		
Arkansas	9,200	
Connecticut	Trace	
Illinois	17,900[2]	This figure for 1948: for 1929-38[2] it was 14,800 acres.
Kentucky	---	Garden beans are commonly affected by Fusarium root rot in farmers' gardens all over the State.
Maryland	5,000	
Massachusetts	100	More intensive cultivation of crop has increased the affected acreage 50 acres over earlier years.
Montana	20,000	
New Jersey	4,000	Increase from only traces earlier.
New York	---	Fusarium dry root rot in the same areas outlined for cabbage yellows. Occurs in these areas whenever long rotations with other crops are not practiced. Has not changed much for at least 30 years, except that it has pushed farther south in the western part of the State.

---

[1] Acreage planted in 1947.

[2] Potential bean acreage affected. Estimated acreage planted in 1948 1,700; average 1929-38 1,570.

Table 1. (Fusarium acreage) continued.

State reporting	Acreage affected	Remarks
(Bean cont.)		
Oklahoma	65	5% of bean acreage
Pennsylvania	144	Loss 5% in 1932-39, 3% in 1940-45. Likely that less than 144 of the 4,800 acres affected
Rhode Island	0	
Texas	Trace	
Virginia	7,000	
West Virginia	25	
Wyoming	900	Has increased with continued cropping (irrigated farms primarily). Definitely worse in 1948 than in previous years.
CABBAGE		
Arkansas	---	No data; very little commercial crop.
Connecticut	200	
Georgia	---	In a few mountain counties
Illinois	1,500	Estimated acreage planted 3,000, 1948. Same as in 1929-38. All cultivated land in the State is infested with *Fusarium*.
Kansas	Over 75%	It is estimated that over 75% of land used for commercial cabbage production is infested with cabbage yellows *Fusarium*. Losses in recent years, however, have not been serious, largely because of yellows-resistant varieties.
Kentucky	---	There has been some yellows in the Louisville area.
Maryland	500	
Massachusetts	100	Use of resistant varieties has reduced the affected acreage from earlier 300
Michigan	250	Disinclination to use resistant varieties
Minnesota	200	Common near St. Paul and Minneapolis, but less common in Freeborn and Carlton Counties.
Montana	---	Present; of no economic importance
New Jersey	1,000	Some of the *Fusarium* problems are acute in specific areas where poor crop rotations are used. Widely distributed but only traces of injury result until

Table 1. (Fusarium acreage) continued.

State reporting	Acreage affected	Remarks
(Cabbage cont.)		
New Jersey (cont.)		the population is built up through continuous cropping with a susceptible crop.
New York	---	About one-third of the cabbage acreage of all the area in the western part of the State known as high-lime area. This extends from northern Chautauqua County eastward, north of southeast Erie County, north of the lower half of Wyoming, Livingston, Ontario, and Seneca Counties, It also touches Yates, and just a trace of the northernmost part of Cortland County. The area from Syracuse east includes the Cherry Valley area or about 10 miles on each side of the Erie Canal, then down the Hudson on an equally wide area, then all of Long Island. One-third of this total area equals about one-fourth of the cabbage acreage of the entire State. This disease was not knowingly present upState before 1914.
North Dakota	100	
Pennsylvania	1,000	1936-1940 loss 11%; 1942-48 loss 2%. More resistant varieties grown. 10,977 acres of cabbage grown in State.
Rhode Island	---	Yellows in some years
Texas	Trace	
Virginia	3,000	
West Virginia	1,000	Use of resistant varieties has reduced the acreage from 25,000 in 1910.
CANTALOUPE		
Maryland	1,500	
CELERY		
Connecticut	0	

Table 1. (*Fusarium* acreage) continued.

State reporting	Acreage affected	Remarks
(Celery cont.)		
Illinois	---	No acreage data available. Celery acreage very small.
Massachusetts	100	
Michigan	2,000 - 3,000	
Minnesota	Trace	
Montana	0	
New Jersey	50	See cabbage
New York	2,275*	Present in all areas where celery is grown intensively. This includes probably half the total acreage of celery in the State. Most of the spread has occurred during the past 25 years.
Pennsylvania	5	Less than 1%; less than 5 infested acres out of the 550 grown.
Rhode Island	0	
Texas	0	
CEREALS		
Arkansas	25,180	
Illinois	13,445,000	100% in 1947. In 1929-38 15,209,700 acres (100%) affected.
Montana	4,500,000	*Fusarium* and *Helminthosporium*
North Dakota	10,000,000	Hard wheat 6,665,000 Barley 2,638,000 Corn 1,141,000
Pennsylvania	---	1 to 2% loss. Earlier 2 to 5% loss, mostly where no rotation. Rotation and seed treatment have reduced the loss.
South Dakota	8,709,000	Barley crop in particular -- the acreage is dwindling because of soil-borne diseases. Also includes winter wheat, spring wheat, durum wheat.
Texas	0	
Virginia	400,000	
Wyoming	100	10 to 20 years ago 200 acres. Continued cropping of dry land farms has reduced acreage planted.
CORN		
Illinois	8,696,000	8,949,500 in 1929-38. All cultivated land in the State infested with *Fusarium*
Kansas	3,154,000*	*Fusarium* pink rot (*F. moniliforme*)

Table 1. (Fusarium acreage) continued.

State reporting	Acreage affected	Remarks
(Corn cont.)		
North Dakota	---	See cereals
South Dakota	4,500,000	
Virginia	1,000,000	
Wisconsin	600,000	300,000 acres previously
COTTON		
Alabama	140,000	No evidence of increase in past 10 years
Arkansas	114,750	This figure is based on 5% of the total cotton acreage. We consider this figure as covering visibly affected fields but we think that every cotton field except those on newly broken land may have enough so that it could be found if the plants were carefully examined.
Georgia	2,000,000	Acreage probably increasing. *Fusarium* wilt of cotton is all over south Georgia and is in most of the sandy parts of north Georgia.
Illinois	4,000	All cultivated land in the State is infested with *Fusarium*. Acreage planted in 1947, 4,000; average 1934-43, 4,500
Oklahoma	85,000	5% of cotton acreage
Texas	30,000	
Virginia	1,000	
COWPEA		
Arkansas	12,000	
Connecticut	0	
Georgia	---	Widespread in fields. Cowpea wilt is just as widespread as cotton wilt.
Illinois	55,000	This was total acreage planted, 1947. Average for 1929-38, planted and affected, 186,800. Soybeans have replaced large part of acreage.
Montana	0	
New Jersey	?	See cabbage.
Oklahoma	22,500	10% of acreage
Rhode Island	0	
Texas	1,000	
Virginia	6,000	

Table 1. (Fusarium acreage) continued.

State reporting	Acreage affected	Remarks
FLAX		
Kansas	25%	
Minnesota	1,500,000	Virtually all of the flax area is infested to some degree, but the use of resistant varieties and crop rotation minimizes its economic importance.
South Dakota	456,000	
MUSKMELON		
Michigan	100	
Minnesota	40-50	No drastic change in area affected. Resistant varieties are now grown. Fusarium wilt is common on muskmelons near Minneapolis and St. Paul, but the crop is grown on only a few acres.
New York	---	An area approximately 20 miles wide, along the Great Lakes, extending from Chautauqua County to Sodus Bay in Wayne County. There are several small islands of infection in fields outside of this area, especially in Genesee, Ontario, and Albany Counties. This disease was first observed about 1917.
OATS		
Illinois	3,343,000	100% of planted acreage, 1947. All cultivated land in the State is infested with Fusarium. Average oat acreage 1929-38, 3,885,800
OKRA, PEPPER, ETC.		
Arkansas	100	
ONION		
Connecticut	300	Limited production as food crop.
Illinois		No acreage data available. Acreage very small.
Massachusetts	800	Acreage affected at an earlier time was estimated at 1500. More profitable crops have been substituted.

Table 1. (Fusarium acreage) continued.

State reporting	Acreage affected	Remarks
(Onion cont.)		
Michigan	500	No data, possibly 500.
Montana	0	
New Hampshire	25	
New Jersey	2,000	Traces
New York	---	No real *Fusarium* trouble on this crop in the State. Certain bulb rots, but this is not primarily a soil problem.
Oklahoma	15	2% of acreage.
Pennsylvania	30	Less than 30 out of the 400 acres of onions in Pennsylvania infected. Loss trace to 5%.
Rhode Island	0	
Texas	0	
PEA		
Connecticut	500	Limits peas to early crop.
Delaware	3,000	All our pea acreage has root rot of one kind or another. 3,000 acres affected in 1938.
Illinois	17,900	This is acreage planted in 1947, 100% affected. All cultivated land in State infested with *Fusarium*. Average acreage for 1929-38 was 14,800.
Maine		Some found occasionally.
Maryland	5,000	
Massachusetts	500	No change from previous years.
Minnesota	100,000	Common wilt of peas would probably be present in all the canning pea area, but no susceptible varieties are grown. Near-wilt is less common.
Montana	34,000	
New Hampshire	100	No change from previous years.
New Jersey	1,000	
New York	---	True wilt rare in the State. A trace probably in all the intensive pea areas. Near-wilt very common and destructive. Appears in all pea fields where long rotations are not practiced. Probably much more general than it was 30 years ago.

Table 1. (Fusarium acreage) continued.

State reporting	Acreage affected	Remarks
(Pea cont.)		
Oklahoma	25	5% of acreage
Pennsylvania	2,000 to 3,000	17,500 acres of peas grown in Pennsylvania. Trace to 0.5% loss.
Rhode Island	0	
South Dakota		All garden areas affected.
Texas	0	
Virginia	2,000	
West Virginia	10	
Wisconsin	20,000	Resistant varieties have reduced the acreage from 80,000.
Wyoming	Trace	
POTATO		
Arkansas	Trace	
Connecticut	150	Seasonal, 2,000 acres affected in 1947.
Delaware	100	Acreage affected at an earlier time unknown. Constant cropping increases loss.
Illinois	11,000	Estimated planted acreage 1948. Average for 1929-38 was 46,900. Economic factors, e. g., change in marketing, etc., caused decrease in planting.
Maine	0	Though probably total acreage (200,000) has tuber rot *Fusaria* in some amount.
Maryland	5,000	
Massachusetts	100	No change from previous years. Use of resistant varieties.
Michigan	Local	No data on total area. Scattered local infestations.
Minnesota	Trace	Of no economic importance.
Montana	17,000	
New Jersey	25,000	Slightly more than 10 years ago. Undoubtedly present in large percentage of acreage but seldom cause of readily detected economic loss.
New York	Trace	Seems less common than it did 30 years ago. A trace is found in same area as cabbage *Fusarium* wilt.
North Dakota	1,300	Improved seed. 2,000 acres affected in 1930.

Table 1. (Fusarium acreage) continued.

State reporting	Acreage affected	Remarks
(Potato cont.)		
Oklahoma	1,300	5% of acreage
Pennsylvania	Trace	
Rhode Island	2,000	The weather conditions in 1948 made this disease our worst for potatoes, cut yields in some fields 50%
South Dakota	40,000	
Texas	Trace	
Virginia	10,000	
West Virginia	2,100	
Wisconsin	Trace	
Wyoming	600	100 acres now out of potato production because of severity of *Fusarium* under dry land conditions.
RYE		
Illinois	57,000	All of cultivated land in the State is infested with *Fusarium*. This is acreage planted in 1947. Average for 1929-38 was 85,700.
SPINACH		
Connecticut	0	
Illinois	---	No acreage data available. Acreage very small.
Maryland	200	
Montana	0	
New Jersey	100	See cabbage
New York	200	*Fusarium* wilt is present in about 200 acres in Nassau County on Long Island. This area probably was infested within the past 20 years.
Oklahoma	150	5%
Pennsylvania		Some likely.
Rhode Island	0	
Texas	0	
TOBACCO		
Kentucky	---	About 1/5 of the farmers who attended the 1948 field meetings at Lexington recognized *Fusarium* wilt of tobacco as a disease they had seen in their own plantings.

Table 1. (Fusarium acreage) continued.

State reporting	Acreage affected	Remarks
SWEET CLOVER AND RED CLOVER		
Illinois	1,500,000	Estimated acreage of land planted in red clover; no data available. All cultivated land in the State is infested with *Fusarium*.
South Dakota	20,000	Only sweet clover mentioned.
Texas	2,000	Sweet and red clover.
SWEETPOTATO		
Arkansas	2,600	Use of certified slips has reduced the acreage affected from 5,000.
Delaware	1,000	Earlier affected acreage 3,000--decrease in acreage of crop.
Georgia	Widespread	In most cultivated fields of South Georgia and also widespread in North Georgia, but there is rarely much of it in any one field.
Illinois	2,200	All of land planted; 2,200 acres in 1947, 6,100 acres average 1929-38.
Kansas	50%	The stem rot fungus (*F. batatatis*) is present in over 50% of ground used in Kansas for this crop but the disease has, during past few years, not caused much loss. The decreased loss is due partly because new land is used when available and to a large degree because of the practice of treating the sprouts which protect the plants against post-planting losses that occur through infection at the wounded ends. Such fungicides as Spergon protect against such infection until the wound is healed.
Kentucky		Common in Louisville area.
Maryland	8,500	
Montana	0	
New Jersey	10,000	Less damage than 10 years ago. Better cultural practices have reduced percentage of infection in infested soils. Some of the

Table 1. (*Fusarium* acreage) continued.

State reporting	Acreage affected	Remarks
(Sweetpotato cont.)		
New Jersey (cont.)		*Fusarium* problems of sweetpotato are acute in specific areas where poor crop rotations are used. *Fusarium* infestations are very widely distributed but only traces of injury result until the population is built up through continuous cropping with a susceptible crop. Dr. Daines reports that "approximately 4% of sweetpotato acreage is lost due to *Fusarium* but practically all the acreage is slightly infested."
New York		Crop almost never grown. One instance of *Fusarium* wilt found on Long Island.
Oklahoma	500	5% of acreage
Pennsylvania	Trace	Trace-1% loss.
Texas	100	
Virginia	15,000	
TOMATO		
Alabama	2,000	Total tomato acreage in State estimated at 13,000.
Arkansas	15,000	2,000 acres severe.
Connecticut		Rare
Delaware	1,000	No basis for earlier estimate. Constant cropping increased loss.
Georgia		Found in every old garden and out in in the fields of a few counties in southeast Georgia that have been growing commercial tomatoes.
Illinois	4,000	Acreage planted 1947, 15,800; estimated acreage with disease, 4,000. Corresponding average for 1929-38, 11,800 and 2,000.
Kansas	50%	In recent years losses small, wilt resistant varieties used.
Kentucky		*Fusarium* wilt develops where tomatoes are grown in the same soil, nearly anywhere in the State except that it is rare in the central blue grass area.

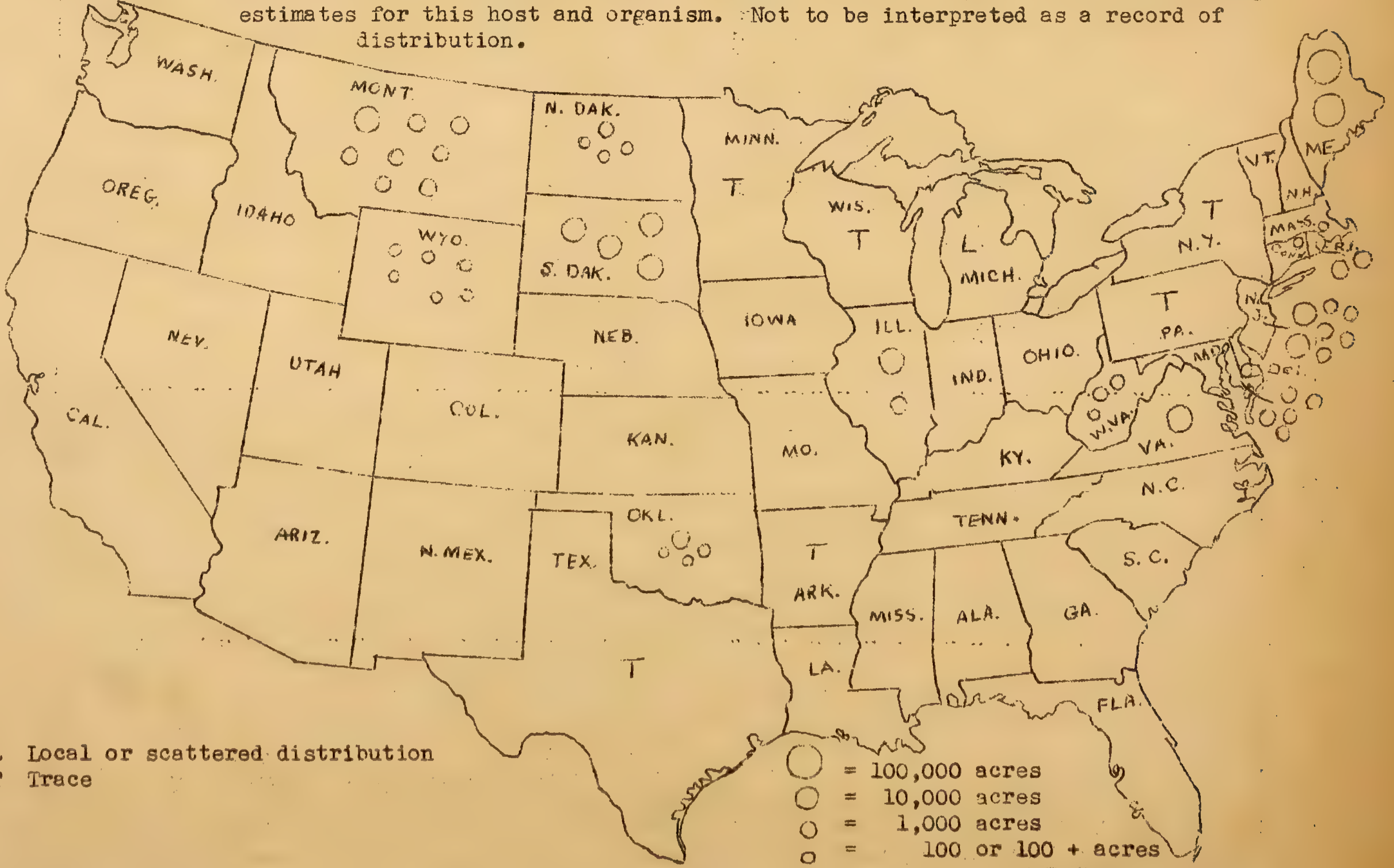
Table 1. (Fusarium acreage) continued.

State reporting	Acreage affected	Remarks
(Tomato cont.)		
Maryland	40,000	
Massachusetts	200	Use of resistant varieties has reduced the affected acreage from 500.
Michigan	Local	Scattered local infestations. Resistant varieties now grown in infested areas.
Minnesota	0	
Montana		Present; it is of no economic importance.
Nevada		Occurs in home gardens.
New Jersey	1,000	See cabbage.
New York	---	About one-half the tomato acreage on Long Island, and a few fields in Chautauqua County. Rarely individual wilted plants are found in the area bordering Ontario and Erie Lakes. This area apparently has not changed, at least since 1912.
Oklahoma	300	10%
Pennsylvania	Trace	In field less than 400 infected acres out of 40,000 grown. In greenhouse over 10% of bed area.
Rhode Island	Trace	
Texas	50,000	
Virginia	25,000	
West Virginia	300	
Wisconsin	Trace	
Wyoming	Trace	Few tomatoes grown.
WATERMELON		
Alabama	5,000	Watermelons are moved to new land as fast as wilt appears. The infested acreage is thus on the increase each year.
Arkansas	420	
Georgia	---	Watermelon wilt has been found widespread in south Georgia but not as widely scattered in north Georgia.
Illinois	2,000	Estimated acreage planted 1948, 2,600; estimated acreage with disease, 2,000. Corresponding acreages, average 1929-38, 5,000 planted, 5,000 affected. *Fusarium*

Table 1. (Fusarium acreage) continued.

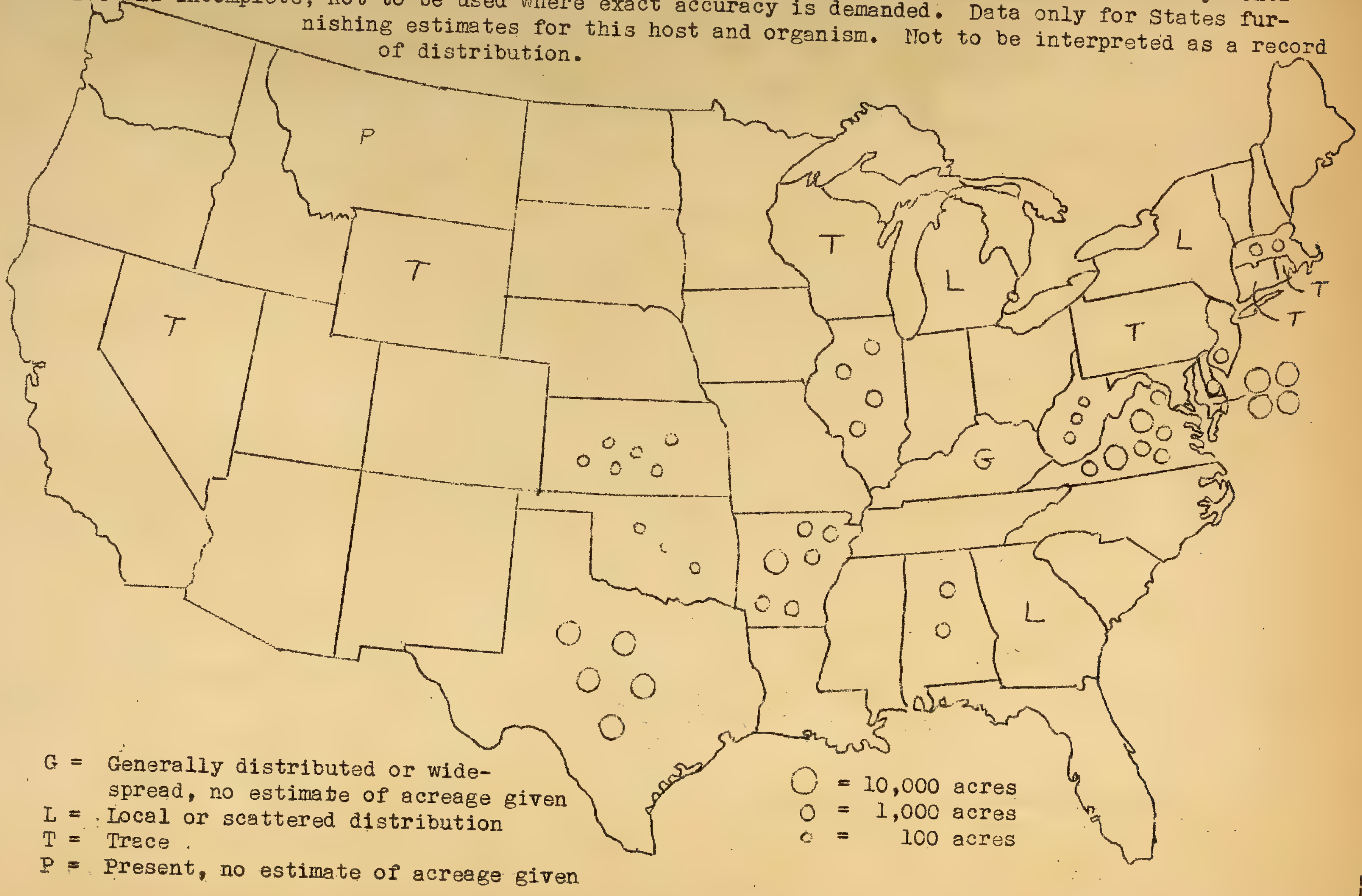
State reporting	Acreage affected	Remarks
(Watermelon cont.)		
Illinois (cont.)		wilt mainly responsible for decreased acreage. Some acres have almost abandoned watermelons.
Kansas	Trace	Kansas has not had much trouble lately with watermelon wilt (Fusarium niveum) probably because this crop is usually grown only at long intervals on the same ground. Wilt has been known in past to be very serious in certain fields and growers no longer grow watermelons in such fields. Of the land that has been planted to watermelons in Kansas, an estimated 25% is infested with the wilt organism.
Kentucky	---	Watermelons fail in the sandy soil along the Ohio River in the vicinity of Cincinnati and east and west.
Maryland	2,500	
Minnesota	Trace	
New Jersey	50	See cabbage.
New York	Trace	A trace observed on Long Island.
Oklahoma	2,000	10%
Pennsylvania	5	Loss 3% in 1938-39. Not recorded in other years.
Rhode Island	0	
South Dakota	2,000	
Texas	20,000	
Virginia	1,500	
West Virginia	100	
Wisconsin	50	None found previously. Susceptible varieties have built up fungus.
GENERAL		
Illinois		All cultivated land in the State is infested with Fusarium.
New Jersey		See cabbage.
Rhode Island		All cultivated soils in the State are infested. We have no concept of the damage done.

Figure 1. Estimated potential acreage, in States reporting, infestested with Fusarium pathogenic to potato. These figures are estimates only, based on best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this host and organism. Not to be interpreted as a record of distribution.



L Local or scattered distribution
T Trace

Figure 2. Estimated potential acreage, in States reporting, infested with *Fusarium* pathogenic to tomato. These figures are estimates only, based on best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this host and organism. Not to be interpreted as a record of distribution.


P
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G
L
G = Generally distributed or widespread, no estimate of acreage given
L = Local or scattered distribution
T = Trace
P = Present, no estimate of acreage given
○ = 10,000 acres
○ = 1,000 acres
○ = 100 acres

Figure 3. Estimated potential acreage, in States reporting, infested with Fusarium pathogenic to watermelon. These figures are estimates only, based on best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this host and organism. Not to be interpreted as a record of distribution.

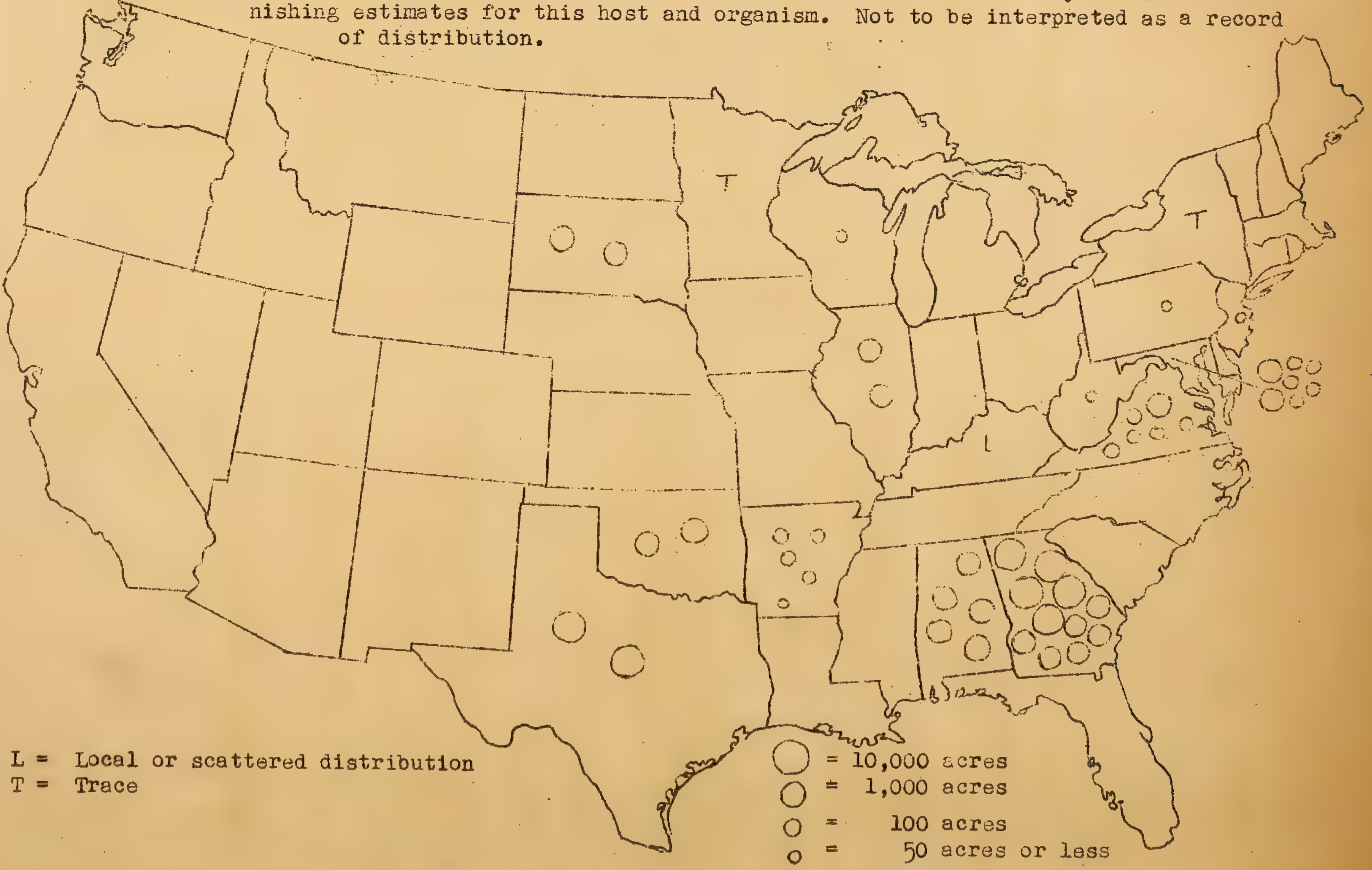


Table 2. Estimated potential acreage of crop land infested with Rhizoctonia, mostly R. solani, in States reporting. These figures are estimates only, based on the best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this organism and the host named; from other States no estimate received. Not to be interpreted as a record of distribution.

State reporting	Acreage affected	Remarks
GENERAL		
Arkansas		Rhizoctonia no doubt present almost everywhere.
Georgia		Not believed to be widespread. Found chiefly in old gardens and in all mountain valleys where potatoes are grown.
Illinois		Rhizoctonia occurs in all cultivated soils of the State.
Kentucky		Probably in all crop lands of State but recognized only occasionally, on potatoes, tobacco, and as common cause of damping-off.
Minnesota		Can be found on practically all plants in all parts of State if looked for.
New Jersey		Probably universally present in our field soils and on susceptible crops may cause noticeable injury to a few plants or to the crop as a whole under very special conditions. Losses are sometimes serious in plant beds under glass but acreage here is low. Soil treatment specifically for Rhizoctonia would not be warranted except in plant beds and greenhouses.
New York		Present in all soils in the State, and on every cultivated and weed host. It becomes severe only when certain weather conditions (the correct combination not fully understood) are present, and crops are grown without rotation.

Table 2. (Rhizoctonia acreage) continued.

State reporting	Acreage affected	Remarks
ALFALFA		
Arkansas	Trace	
Illinois	521,000	Acreage planted in 1947, 521,000; average for 1934-43 was 477,000. R. crocorum occurs probably in all soils of the State, although occasionally found on alfalfa, it is not an important pathogen.
Kansas	0.1%	R. crocorum
Massachusetts	800	No change in acreage noted from previous years.
New Jersey	General	
Oklahoma	300,000	
Pennsylvania	---	316,951 acres of alfalfa, but acreage affected unknown.
South Dakota	381,000	Alfalfa and Timothy
Texas	0	
Virginia	10,000	
BEAN		
Illinois	1,700	Estimated acreage for 1948. Average for 1929-38 was 1,570. Rhizoctonia occurs in all cultivated soils of the State.
Maine		Some found occasionally.
Texas	1,000	
Wyoming	500	
CABBAGE		
Illinois	3,000	Estimated acreage planted for 1948. Average for 1929-38 was 2,335. Only affects seedlings. See general
Massachusetts	1,000	No change in acreage noted from previous years.
New Hampshire		Greenhouse problem only
New Jersey		Greenhouses only
Oklahoma	100	
Pennsylvania	5,000	Loss 1 to 2%. Likely present in 5,000 of the 10,977 acres grown in Pennsylvania.
Texas	100	
Virginia	3,000	
CEREALS		
Arkansas	Present	
New Jersey	Trace	
North Dakota	50,000	
Oklahoma	1,000,000	

Table 2. (Rhizoctonia acreage) continued.

State reporting	Acreage affected	Remarks
(Cereals cont.)		
Pennsylvania	Trace	Wheat 903,442 acres; oats 817,142 acres; barley 100,531 acres in the State.
Wisconsin	Trace	
COTTON		
Alabama	500,000	
Arkansas	200,000	Probably present in 2,000,000 acres but generally slight damage.
Illinois	4,000	Acreage planted in 1947, 4,000. Average 1934-43, 4,500. See general.
Oklahoma	1,500,000	
Texas	5,000,000	
Virginia	20,000	
COWPEA		
Oklahoma	200,000	
Texas	5,000	
FLAX		
Minnesota		Of minor importance on flax. See general.
GRASSES		
Minnesota		Of minor importance on grasses. See general.
LADINO CLOVER		
Wisconsin	200	New crop
LETTUCE		
Massachusetts	2,000	Same as previously
LEGUMES		
Oklahoma	8,000	See also soybean and cowpea.
PEANUTS		
Oklahoma	70,000	
Texas	1,000	
PEAS		
Illinois	17,900	See general. 17,900 acres planted in 1947; average 14,800 acres for 1929-38.
Maine		Some found occasionally.

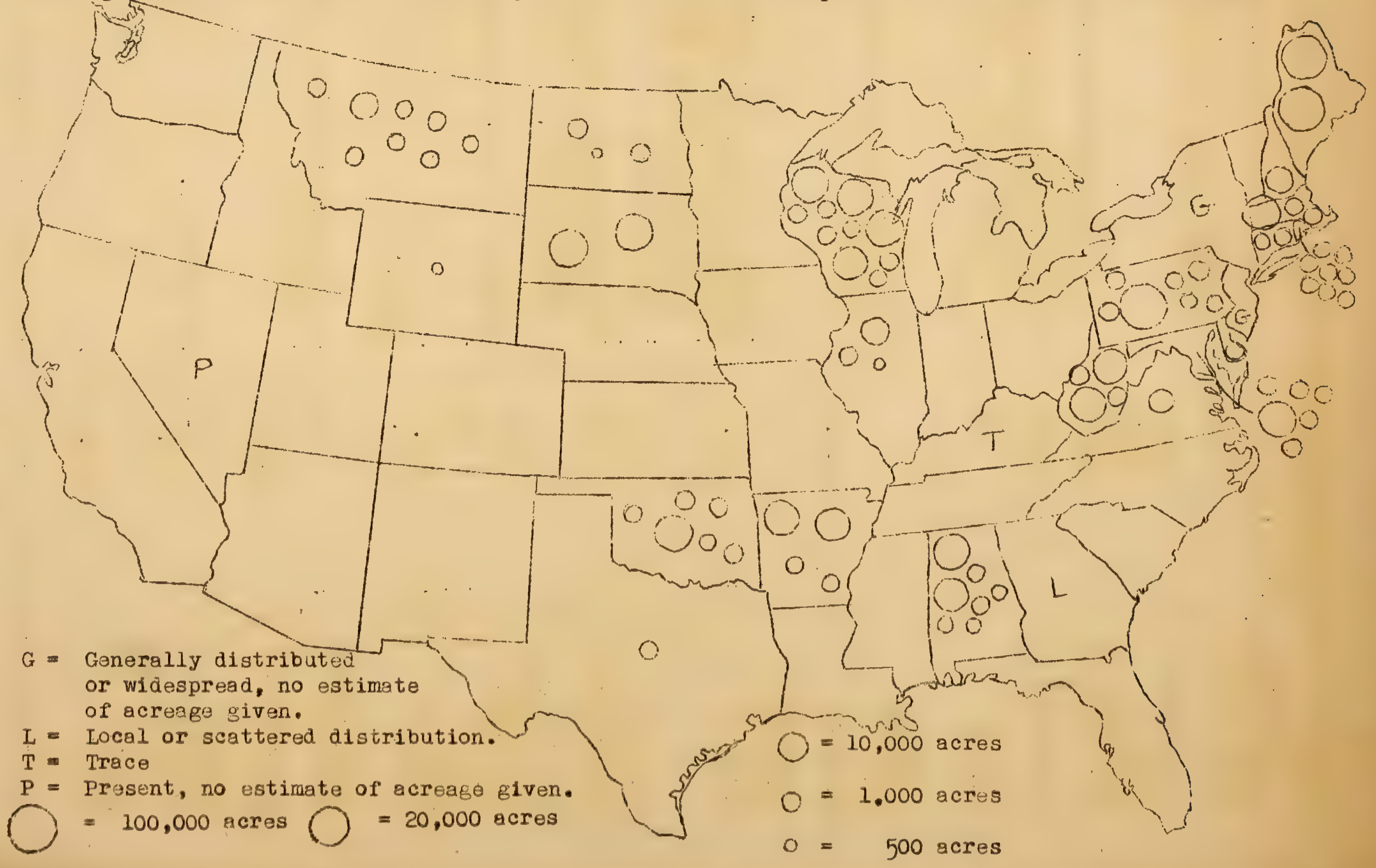
Table 2.. (Rhizoctonia acreage) continued.

State reporting	Acreage affected	Remarks
(Peas cont.)		
Maryland	5,000	
Massachusetts	1,000	Same as other years.
Montana	34,000	
North Dakota		7,000 acres in peas; no data as to acreage affected.
New Jersey	Scattered	See general.
Oklahoma	500	
Pennsylvania	5,800	Loss 1/2 to 1%. Scattered infection in at least 1/3 of Pennsylvania's 17,500 acres.
Virginia	1,000	
Wisconsin	Trace	
Wyoming	Slight	
POTATO		
Alabama	45,000	No serious loss.
Arkansas	42,000	Damage slight.
Connecticut	2,000	
Delaware	1,000	Always has been infected since crop was grown.
Georgia	Local	Chiefly in mountain counties and valleys and in gardens or where truck has been grown. Not widespread.
Illinois	11,000	Estimated acreage for 1948. Average for 1929-38, 46,900. R. solani occurs probably in all soils of the State.
Kentucky	---	See general.
Maine	200,000	Estimated by chief certification inspector. Maximum infection = 75% of missing hills.
Maryland	25,000	
Massachusetts	22,000	15,000 acres affected in 1940. Increase in potato culture increased affected acreage.
Montana	17,000	
Nevada		Occurs but affected acreage is not known.
New Hampshire	10,000 to 2,500	All land in State where potatoes are grown; varies from 10,000 to 2,500 acres.
New Jersey		Probably slightly less than 10 years ago. See general.
New York	---	See general.
North Dakota	2,500	135,000 acres planted.
Oklahoma	25,000	
Pennsylvania	106,000	Most soil infested. 1946-47 loss 7.5%, 1937-45, 2.5%. Wet springs 1946-47. Some in all of 106,000 acres of potatoes in Pennsylvania in 1948.

Table 2. (Rhizoctonia acreage) continued.

State reporting	Acreage affected	Remarks
(Potato cont.)		
Rhode Island	8,000	Annually. Injury varies with edaphic factors during growing season.
South Dakota	40,000	
Texas	1,000	
Virginia	10,000	
West Virginia	42,000	Light infection mostly--not much change through year.
Wisconsin	86,000	196,000 affected previously. Different cropping practices used.
Wyoming	500	Not a major trouble---potatoes planted late.
SOYBEAN		
Minnesota		Of minor importance on soybeans. See general.
Oklahoma	10,000	
STRAWBERRY		
Arkansas		Present, severe only locally.
Illinois	3,000	Estimated acreage for 1948. Average for 1929-38, 5,100. Many growers had larger acreages than they could care for profitably.
Maryland	100	
Massachusetts	300	500 acres in 1940. High cost of production in recent years has decreased acreage grown.
New Hampshire	100	
New Jersey		Common in roots. See general.
Oklahoma	100	
Texas	0	
Virginia	3,000	
Wyoming	---	Slight
SWEET CLOVER		
Minnesota	---	Is of minor importance on sweet clover. See general.
South Dakota	20,000	
TOBACCO		
Kentucky	---	See general.
Virginia	50,000	
TOMATO		
Texas	20,000	

Figure 4. Estimated potential acreage, in States reporting, infested with Rhizoctonia pathogenic to potato. These figures are estimates only, based on best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this host and organism. Not to be interpreted as a record of distribution.



G = Generally distributed or widespread, no estimate of acreage given.
L = Local or scattered distribution.
T = Trace
P = Present, no estimate of acreage given.
◯ = 100,000 acres
◯ = 20,000 acres
○ = 10,000 acres
○ = 1,000 acres
○ = 500 acres

Table 3. Estimated potential acreage of crop land infested with *Sclerotinia sclerotiorum*, in States reporting. These figures are estimates only, based on the best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this organism and the host named; from other States no estimate received. Not to be interpreted as a record of distribution.

State reporting	Acreage affected	Remarks
GENERAL		
Alabama		Found occasionally but no records of any appreciable loss on any crop from this fungus.
Arkansas		Seldom seen except in traces.
Georgia		Very rare according to observations.
Illinois		This fungus is probably present in most of our soils but, as far as we know, has not caused any appreciable loss in any of the crops.
Kentucky		Would expect this fungus, because of the method of spore production, to be found anywhere. Actual damage from the fungus is probably very limited.
Maryland		No estimate possible.
Minnesota		Practically no economic importance.
New Hampshire		May be present, but not seen on other hosts than bean.
New Jersey		Observations in table below apply to field cultures. In plant beds and in North Jersey where many acres of vegetables are grown under glass, *Sclerotinia* often causes such serious losses that soil sterilization is called for.
New York		This organism is present in all soils where cabbage, carrots, and celery are grown continuously, or where such crops as beans, clover, and parsley are grown in especially thick stands. It always is present in certain greenhouse soils. When resistant crops as cereals, grasses, potatoes, beets, corn, onions, etc., are grown for several years, the inoculum disappears until a series of susceptible crops again are grown. It has always been State-wide.

Table 3. (Sclerotinia acreage) continued.

State reporting	Acreage affected	Remarks
(General cont.)		
Rhode Island		Drought in August-September caused absence of disease in 1948, but when rainfall is abundant this fungus causes conderable damage. Chief losses in common storage.
Texas		Probably 500 acres for various hosts, and 500 where tomatoes are grown.
West Virginia		Not serious.
Wisconsin		Rarely found.
ALFALFA		
Georgia		In mountain counties.
South Dakota	381,000	
BEANS		
Delaware	0	
Massachusetts	500	No change in affected acreage through years.
Montana	1,000	
New Hampshire	10	
New Jersey	Trace	See general.
New York		See general.
Pennsylvania	Trace to 1%	Only a trace infection in 4,800 acres of snap beans.
Rhode Island	0	10 acres potentially affected. Drought August-September in 1948 caused absence of disease. See general.
Virginia	6,000	
West Virginia	Trace	
Wyoming	500	Increase from 250 acres previously. Continued cropping caused gradual spread in soil.
CABBAGE		
Delaware	0	
Georgia	---	Not widespread. Found near Athens.
Massachusetts	600	No change in affected acreage.
Montana	None	
New Jersey	---	Occasional plants. See general.
New York	---	See general.
Pennsylvania	Trace to 1%	
Rhode Island	0	10 acres potentially affected. None in 1948. See general.

Table 3. (Sclerotinia acreage) continued.

State reporting	Acreage affected	Remarks
CARROT		
Delaware	None	
Massachusetts	2,000	
Montana	None	
New Jersey	---	Occasional plants. See general.
New York	---	See general.
Pennsylvania		Records show trace to 2% loss.
Rhode Island	0	10 acres potentially affected. See general.
CELERY		
Connecticut	50	
Delaware	0	
Massachusetts	---	Of little importance on this host.
Montana	0	
New Jersey	---	Occasional plant. See general.
New York	---	See general.
Pennsylvania	250	Loss 1 to 10%; 250 acres infested out of 550 in Pennsylvania. Losses higher previously; storing at lower temperature has reduced them.
Rhode Island	0	None in 1948. See general. 5 acres of celery land potentially infested.
RED CLOVER		
Georgia	---	Found in mountain counties on clover.
New Jersey	100	About 100 acres of red clover fields severely infected have been recorded. See general.
New York	---	See general.
LETTUCE		
Georgia	Not widespread	See general. Coastal Counties chiefly. Records on lettuce near Athens and in Glynn County and on the Islands off Brunswick.
Kentucky	---	Have seen it on lettuce in the Lexington area.
Minnesota	---	Occasionally destructive on head lettuce on a few acres in Northern Minnesota.
New Jersey	200	See general. About 200 acres of lettuce soil severely infested have been recorded.

Table 3. (Sclerotinia acreage) continued.

State reporting	Acreage affected	Remarks
PARSLEY		
New York	---	See general.
PEAS		
Delaware	0	
Massachusetts		Of little importance on this host.
Montana	0	
New Jersey		Not observed.
Pennsylvania	0	No infection in the 17,500 acres of peas in Pennsylvania.
Texas	Trace	
Virginia	2,000	
Wyoming	Trace	
POTATO		
Maine	---	Some found occasionally.
STRAWBERRY		
Delaware	0	
Illinois	---	Very little. See general.
Massachusetts	---	Of little importance on this host.
Montana	0	
New Jersey		Not observed on strawberry. See general.
Pennsylvania	0	No infection in 2,200 acres in Pennsylvania.
Virginia	3,000	
SUNFLOWER		
Minnesota	---	Has been found on sunflower, but is of practically no economic importance.
North Dakota	500	Increased from traces earlier because sunflowers grown more extensively.
SWEET CLOVER		
South Dakota	20,000	
TOMATO		
Delaware	0	
Illinois		See general.
Massachusetts		Of little importance on this host.
Montana	0	
New Jersey	Trace	See general.
Oklahoma	Very minor	

Table 3. (Sclerotinia acreage) continued.

State reporting	Acreage affected	Remarks
(Tomato cont.)		
Pennsylvania	10	Only a trace; less than 10 acres out of 40,000 grown in Pennsylvania.
Texas	500	
West Virginia	Trace	Not a serious pest in this State.
Wisconsin	Trace	Rarely found in this State.

Table 4. Estimated potential acreage of crop land infested with Verticillium, in States reporting. These figures are estimates only, based on the best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this organism and the host named; from other States no estimate received. Not to be intrepreted as a record of distribution.

State reporting	Acreage affected	Remarks
GENERAL		
Arkansas		We believe that Verticillium is generally present in most Arkansas soils. We have found isolated infections on several hosts. Incidence varies tremendously with the season.
Illinois		All cultivated acreage in the State infested.
Minnesota		Can be found on potato, eggplant, and tomato but does not seem to be of economic importance.
Montana		No information available.
New Jersey		Indications are that fungus is very widely distributed but no evidence that it is causing appreciable injury to any crop except eggplant. See eggplant.
New York		So far as is known all soils in New York State contain Verticillium. Apparently, however, the strains are relatively dormant until certain crops are grown repeatedly in the same soil. Most crops are not affected unless the soil is saturated continually with water for a number of days. This is true especially of crops like potatoes and tomatoes. But black raspberries and eggplant, which are very susceptible, become infected even in moderately dry soil. Occurs on nearly every cultivated and weed plant known.

Table 4. (Verticillium acreage) continued.

State reporting	Acreage affected	Remarks
(General cont.)		
Texas		Not a factor in crop production, except in the case of cotton.
Wyoming		As far as known, no soil infestation with *Verticillium*.
CHRYSANTHEMUM		
New Jersey	Trace	See eggplant.
New York	---	See general.
COTTON		
Alabama	500	
Arkansas	159,335	Great fluctuation due to weather. We believe that *Verticillium* is present in most Arkansas soils. We have had it affect cotton in northwest Arkansas soil never before in cotton. The estimate is based on 25% of the soils of the Mississippi Delta in Arkansas which are devoted to cotton -- 637,840 acres in 1946 in counties touching the Mississippi. 25% of this area will have some visible indication of *Verticillium* wilt on the average. The area where the disease is really serious would be much less.
Georgia	Trace	Recent introduction; discovered near Griffin and probably only place where it occurs at present.
Illinois	4,000	4,000 acres planted in 1947; 4,500 average for 1934-43. All cultivated soils infested.
Oklahoma	8,000	0.5%
Texas	15,000	
EGGPLANT		
Alabama		Not reported on this plant in Alabama.
Arkansas		No data.
Connecticut	10	100%
Illinois	---	No acreage data available.
Kentucky	---	There has been some *Verticillium* trouble on eggplant in the Louisville vegetable growing area.
Massachusetts	200	
Michigan		No record.

Table 4. (Verticillium acreage) continued.

State reporting	Acreage affected	Remarks
(Eggplant cont.)		
Minnesota	Trace	Can be found on eggplant but does not seem to be of economic importance.
New Hampshire	10	Some *Verticillium* has been found on eggplant. Eggplant is grown only in home gardens in the southern part of the State, thus the number of infested areas may be many but the total average small.
New Jersey	800	*Verticillium* on potatoes and tomatoes can be found in many plants by tissue culturing, indicating that the organism is very widely distributed but we have no evidence that *Verticillium* is causing appreciable injury on any crop except eggplant. *Verticillium* on eggplant is a major problem and we believe that approximately half of our 1700 acres of eggplant land is fairly heavily infested. *Verticillium* is so universally present as a soil fungus that we would probably have to admit that 100% of our soil is very lightly infested but only under certain cropping systems does the fungus cause any economic losses. Okra and eggplant finally become infected almost anywhere that these crops are planted year after year on the same farm.
New York	---	See general.
Pennsylvania	60%	Nearly all acreage having eggplants the previous year and half of the acreage for first year.
Rhode Island	---	None seen this season; 5 acres affected at other times. Small acreage grown.
West Virginia	Trace	
ELM		
Arkansas		Seen on elm.

Table 4. (Verticillium acreage) continued.

State reporting	Acreage affected	Remarks
FLOWERING PEACH		
Arkansas		Seen on flowering peach.
OKRA		
New Jersey	Present	Okra and eggplants finally become infected almost anywhere that these crops are planted year after year on the same farm. See eggplant.
PEACH		
New Jersey	Trace	See eggplant.
New York		See general.
PEPPER		
Illinois	700	700 acres planted in 1947; 684 in 1942. All cultivated acreage infested. Increasing in severity on pepper.
New York	---	See general.
PEPPERMINT AND SPEARMINT		
Michigan	10,000 to 20,000	Including abandoned sites. Unrestricted exchange of planting stock from infested soil has spread it.
POTATO		
Alabama		Not reported on this host.
Arkansas		No data. See general.
Connecticut	0	
Illinois	11,000	11,000 estimated planted in 1948; average for 1929-38 was 46,900. Economic factors, e.g., change in marketing, etc. caused decreased acreage. See general.
Maine	20,000	Estimate by chief certification inspector. Maximum for one field, 35% dead plants.
Massachusetts	1,000	
Michigan	50	Severely affected. Scattered lightly affected areas previously observed.
Minnesota	Trace	Can be found on potato but does not seem to be of economic importance.
Nevada	---	Occurs but affected acreage is not known.

Table 4. (Verticillium acreage) continued.

State reporting	Acreage affected	Remarks
(Potato cont.)		
New Jersey	Present	See eggplant.
New York	---	See general.
Pennsylvania	Trace	Only report we have, a trace in 1923.
Rhode Island	Trace	
Texas	---	Disease not a factor in crop production except cotton.
West Virginia	0	
Wisconsin	Trace	Very minor.
PRIVET AND FLOWERS		
Massachusetts	25	
RASPBERRY		
Alabama		Not reported on this plant in Alabama.
Arkansas		No data.
Illinois	---	No acreage data available. Very little on raspberry.
Maryland	100	
Massachusetts	75	
Michigan	---	No records but present since specimens are received each season. No survey has been made.
New Jersey	Trace	See eggplant.
New York	---	See general.
North Dakota	100	
Pennsylvania	200	10%. In 200 acres out of 2,474 acres of raspberries in Pennsylvania.
Rhode Island	0	
SNAPDRAGON		
Michigan		Occasionally reported in garden plantings.
TOMATO		
Alabama		Not reported on this plant in Alabama.
Arkansas		No data.
Connecticut	0	
Delaware	500	Seems to be on increase due to constant cropping.
Illinois	15,800	Acreage planted in 1947. Average for 1936-45, 14,010. See general. No acreage changes in last 10 years.

Table 4. (Verticillium acreage) continued.

State reporting	Acreage affected	Remarks
(Tomato cont.)		
Massachusetts	300	
Michigan		No record.
Minnesota	Trace	Can be found on tomato but does not seem to be of economic importance.
Nevada	---	Occurs in home gardens.
New Jersey	Present	See eggplant.
New York	---	See general.
Pennsylvania	Trace	Almost none in field, mostly in greenhouse.
Rhode Island	---	None observed this year; 50 acres affected at other times. Depends on weather conditions. Severe some years.
Texas	---	Disease not a factor in crop production, except in case of cotton.
West Virginia	Trace	
Wisconsin	Trace	Very minor.
MAPLE TREES		
Rhode Island		Scattered but prevalent.

Table 5. Estimated potential acreage of crop land infested with Phymatotrichum omnivorum, in States reporting. These figures are estimates only, based on the best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this organism and the host named; from other States no estimate received. Not to be interpreted as a record of distribution.

State reporting	Acreage affected	Remarks
GENERAL		
Arkansas	---	Almost absent from the State but is often present in small spots in Red River and Little River soils in Little River, Miller, and Lafayette Counties. We consider it distinctly minor. Less than 435 acres of cotton land affected; 100 acres estimated for alfalfa.
Nevada	5,000	
Oklahoma	600,000	2% of farm land.
Texas	1,300,000	

Table 6. Estimated potential acreage of crop land infested with *Heterodera marioni*, in States reporting. These figures are estimates only, based on the best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this organism and the host named; from other States no estimate received. Not to be interpreted as a record of distribution.

State reporting	Acreage affected	Remarks
GENERAL		
Alabama	450,000	
Arkansas	863,500	15% of total cultivated acreage. Percentage of cultivated soil affected was formerly less, because much clayey hill land not subject to root knot is now taken out of cultivation and in pasture.
Connecticut	---	Not common.
Georgia	---	Found in practically every garden and is widespread in fields in South Georgia and in most of the lighter soils of North Georgia.
Illinois	---	No data available.
Kansas	---	No data available. Occurs in south central and southeastern Kansas.
Kentucky	---	There are scattered small plots that are infested as the result of importations of tomato and cabbage plants from the South or use of plants from infested greenhouses. Total acreage is very small.
Maryland	10,000	
Minnesota	0	
Nevada	---	Generally distributed throughout State.
New Hampshire		Greenhouse problem only.
New Jersey		I believe it is Dr. Steiner's opinion that this nematode is universally present in New Jersey soils in slight traces. My estimates below are based on acreage that is sufficiently heavily infested to cause noticeable injury.

Table 6. (Heterodera acreage) continued.

State reporting	Acreage affected	Remarks
(General cont.)		
New Jersey (cont.)		It causes appreciable damage in plant beds and to greenhouse vegetables and ornamentals.
New York	400	Vegetable fields on upland.
	600	Vegetable fields on muckland. Is indigenous on weeds in this State. It is held down by rotating or fumigation, but doubtless is increasing. Is reduced by cold open winters and increases after mild snowy ones.
	50	Or 75% of vegetable greenhouse area.
	50	Or 15% of floral greenhouse area. Gradually on the increase in greenhouses as it is never eradicated; only held down by steaming, fumigating, rotating, and changing soil.
North Dakota	---	No records on this. Probably more important than we suspect.
Oklahoma	200,000	10% of crop land.
Rhode Island	5	Almost all greenhouses growing tomatoes, cucumbers, gardenias, and other warm temperature crops are infested. Many greenhouses have failed or changed their crops because of this pest. None found in field soils.
Texas	10,000,000	
Virginia	---	Estimate 10,000 acres in home vegetable gardens. See also tomato, tobacco. General on ornamental and vegetable seedlings in greenhouses.
West Virginia	---	Primarily of importance in gardens in southern west Virginia, in Raleigh, Fayette, Mercer, Logan, Lincoln, Boone, McDowell Counties. Approximately 5% of the gardens are affected; no accurate date on total acreage.
Wisconsin	---	Not found in field. Traces in old greenhouses in Milwaukee area. Tomato main crop affected.

Table 6. (Heterodera acreage) continued.

State reporting	Acreage affected	Remarks
CARROT		
Massachusetts	50	In small areas near commerical vegetable and ornamental greenhouses.
Michigan	250-500	
New Jersey	---	Occasional. See general.
Pennsylvania	---	Some.
CELERY		
Michigan	500	
New Jersey	---	In muck. See general.
Pennsylvania		Some.
CUCURBITS		
Delaware	200	Seems to be on increase.
Rhode Island	---	Greenhouses. See general.
GARDENIA		
Rhode Island		See general.
HORSERADISH		
New Jersey	---	Occasional. See general.
LIMA BEANS		
Delaware	100	Seems to be of recent appearance.
New Jersey	1,000	Appreciable damage on possibly 1,000 acres in Cape May County. See general.
ONION		
Michigan	500-750	
PARSNIPS		
New Jersey		Occasional. See general.
PEANUT		
Georgia	---	Last summer and this summer (1948) we have had what is apparently a new strain on peanuts in two or three southern counties. See general.
PEONY		
Michigan	250	

Table 6. (Heterodera acreage) continued.

State reporting	Acreage affected	Remarks
PEPPER		
New Jersey	---	Occasional. See general.
POTATO		
Maine	---	Some found rarely by Nematode Survey.
SPINACH		
New Jersey	---	In muck. See general.
STRAWBERRY		
Delaware	500	Has appeared recently since strawberries are grown on sandy soils.
Michigan	300	
SUGAR BEETS		
Montana		Present in a few fields.
TOBACCO		
Massachusetts	---	Undetermined amount of tobacco land infestation in southern towns.
Virginia	5,000	
TOMATO		
New Jersey	---	Few fields. See general.
Pennsylvania	---	Some.
Rhode Island		Greenhouse. See general.
Virginia	10,000	
Wisconsin	---	Traces in old greenhouses in Milwaukee area. Tomato main crop affected.

Table 7. Estimated potential acreage of crop land infested with nematodes other than the root-knot nematode, in States reporting. These figures are estimates only, based on the best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this organism and the host named; from other States no estimate received. Not to be interpreted as a record of distribution.

State reporting	Acreage affected	Remarks
ALFALFA STEM NEMATODE (Ditylenchus dipsaci)		
Nevada	10,000	
ONION BULB NEMATODE (Ditylenchus putrefaciens)		
New York	500	None in 1930. One crop system with no or inadequate rotation responsible for spread.
SUGAR BEET NEMATODE (Heterodera schachtii)		
Wyoming	50	
MEADOW NEMATODE (Pratylenchus pratensis)		
Maryland	---	Known to be widely distributed on ornamentals but no acreage estimate possible.
Virginia	1,000,000	

Table 8. Estimated potential acreage of crop land infested with other organisms, in States reporting. These figures are estimates only, based on the best available information, but mostly tentative and incomplete; not to be used where exact accuracy is demanded. Data only for States furnishing estimates for this organism and the host named; from other States no estimate received. Not to be interpreted as a record of distribution.

State reporting	Acreage affected	Remarks
Actinomyces ipomoea		
SWEET POTATO		
Kansas	50%	Estimated 50% of land used for sweet-potatoes in Kansas is infested with the soil pox organism. Severity of infection varies from mere presence to amount because of which growers no longer risk planting in those fields. Much otherwise good sweetpotato land in Kansas is no longer used for sweetpotatoes because of soil pox infestation.
Bacterium solanacearum		
TOBACCO		
Virginia	2,000	
TOMATO		
Virginia	500	
Corynebacterium insidiosum		
ALFALFA		
Kansas	80%	Based on the 1948 crop. However, since alfalfa wilt remains alive in the soil for several years, it is possible that the land infested with this bacterium would be double or triple the acreage of the crop grown in 1948.
Diplodia zeae		
CORN		
Kansas	75%	

Table 8. (Other Organisms) continued.

State reporting	Acreage affected	Remarks
Dry land root rot		
WHEAT		
Kansas	30%	
Gibberella zeae		
CORN		
Kansas	5%	Ear and stalk rot.
WHEAT		
Kansas	3%	Scab.
Helminthosporium spp.		
BARLEY		
Wisconsin	50,000	Formerly 10,000 acres estimated; increase due to susceptible varieties.
CEREALS		
Oklahoma	1,000,000	
Helminthosporium victoriae		
OATS		
Kansas	90%	Although this disease did not occur in the State a few years ago, at present 90% of the acreage is infested with this fungus.
Wisconsin	150,000	Did not occur until recently. Victoria hybrids responsible.
Milo disease		
SORGHUM		
Kansas	80%	
Nigrospora spp.		
CORN		
Kansas	20%	Ear and cob rot.
Ophiobolus graminis		
WHEAT		
Kansas	25%	
Phytophthora sp.		
SWEETCLOVER		
Kansas	30%	Phytophthora root rot.

Table 8. (Other Organisms) continued.

State reporting	Acreage affected	Remarks
Phytophthora nicotianae		
TOBACCO		
Virginia	1,000	None prior to 1937; introduced and spread since then.
Sclerotium bataticola		
CORN		
Illinois	8,696,000	State-wide in distribution. Affects chiefly corn, and is of minor importance in the southern third of the State. 8,696,000 acres planted in 1947; average for 1929-38 was 8,949,500 acres of corn.
Kansas	80%	
SORGHUM		
Kansas	80%	
SOYBEAN		
Kansas	60%	
Sclerotium rolfsii		
GENERAL		
Arkansas	---	May cause serious injury in fields of potatoes, peppers, cucurbits, and garden flowers (possibly S. delphinii in the latter case). It may also be serious in sweetpotato beds. Causes as much loss as several of the organisms listed. More serious than the Sclerotinia.
Sorosporium reilianum		
SORGHUM		
Kansas	2%	